UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/990,868	11/21/2001	Dennis L. Montgomery	042503/0273341 (ETV-015U)	2260

909 7590 11/15/2004

PILLSBURY WINTHROP, LLP
P.O. BOX 10500
MCLEAN, VA 22102

EXAMINER	
AZARIAN, SEYED H	

ART UNIT	PAPER NUMBER
2625	

DATE MAILED: 11/15/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	09/990,868	MONTGOMERY, DENNIS L.	
	Examiner	Art Unit	
	Seyed Azarian	2625	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *21 November 2001*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-12* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-12* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☒ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *21 November 2001* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date *6/25/2003*.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

Specification

1. The disclosure is objected to because of the following informalities: In page 2, paragraph 9, line1, "one" should be "once".

Appropriate correction is required.

Claim Objections

2. The numbering of claims is not in accordance with 37 CFR 1.126 which requires the original numbering of the claims to be preserved throughout the prosecution. When claims are canceled, the remaining claims must not be renumbered. When new claims are presented, they must be numbered consecutively beginning with the number next following the highest numbered claims previously presented (whether entered or not).

Misnumbered claims 7 and 8 must be renumbered to indigested claim.

Claim Rejections - 35 USC § 102

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

4. Claims 1-2, 6-8 and 10, are rejected under 35 U.S.C. 102(b) as being anticipated by Hill et al (U.S. patent 5,471,239).

Regarding claim 1, Hill discloses a system a method of detecting occurrence of an event, the method comprising (see abstract, detecting occurrence of scene change, also Fig. 8, column 2, lines 34-35, security system having a scene change detection);

comparing a first compressed digital frame size to a later compressed digital frame size in a sequence of compressed digital image frames to determine whether a change in size exists that is greater than a predetermined amount (Fig. 5, column 7, line 58 through column 8, line 7, detecting the changes of scene and comparison of threshold values. Thus at step 61, the compression of previous value and new value, indicating if any changes taken place, with reference to the threshold values is shown in Fig. 6);

and, if the change in size is greater than the predetermined amount, using that determination to indicate the occurrence of the event (column 8, lines 1-7, as clearly seen from this graph, C is given value of zero, indicating no scene change has taken place and minus one if Z is smaller than T2, and C is given a value of plus one if Z is larger than T1 (reference image), based on the threshold values).

Regarding claim 2, Hill discloses the method of claim 1, wherein the occurrence of the event is an appearance of a new object in the later compressed frame (column 8, lines 57-60, an intruder (new object), enters the field of view, the amount of information in the image will change significantly. This change in each compressed frame is recognized by central processing, which indicates that an intruder has entered).

Regarding claim 6, Hill discloses the method of claim 2, further comprising performing external pattern recognition on the later compressed frame using an external pattern and further comprising generating an alert when the external pattern recognition matches the external pattern to the new object (see claim 5, also Fig. 1, element 18 (audio control panel), element 16 (displaying information) relating to audio signal and element 17 (displaying information) relating to the video signal, also column 8, line 57-66, changes of data in each compressed frame is recognized by the central processing unit and indicating intruder has entered the field of view (visual alert and that may result in a control signal being supplied to an alarm, thereby activating alarm)).

Regarding claim 7, Hill discloses the method of claim 8, wherein the alert includes a visual alert indicating identity of the new object (column 8, line 57-67, changes of data in each compressed frame and indicating intruder has entered the field of view (visual alert)).

Regarding claim 8, Hill discloses the method of claim 8, wherein the alert includes an audible alert (Fig. 1, element 18, column 8, lines 61-66 activating alarm).

Regarding claim 10, Hill discloses the method of claim 1, wherein the first compressed digital frame provides an image of a stationary scene that does not contain movement therein and the later compressed digital frame includes a new object (see claim 6, also column 6, lines 16-21, in response to program control and to data supplied from the compression circuitry and stored, the processing unit is arranged to analyze and process the numbers generated for each frame which represent the amount of

compressed data in that frame, once processed the data will be generated that's required to display the scene change display element);

indicating movement occurring within the scene (column 8, lines 49-66, if data present in each compressed view remains substantially constant, given that view is not changing, resulting in the amount of data present in the compressed video being substantially the same. However, if an intruder enters the field of view the amount of information will change significantly, resulting in the change of compressed video data changing and will be recognized by the central processing unit, indicating an object has entered the field of view, this may result in a control signal being supplied (or transmitted) to an alarm).

Claim Rejections - 35 U.S.C. § 103

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

6. Claims 3-5 and 11-12, are rejected under 35 U.S.C. 103(a) as being unpatentable over Hill et al (U.S. patent 5,471,239), in view of Coutta (U.S. patent 4, 120,004).

Regarding claim 3, Hill does not explicitly state "periodically selecting a frame in the sequence of compressed frames". On the other hand in the same field of surveillance system, Coutta, teaches in order to provide effective monitoring over a relatively long period of time which may be represented on the monitor in a shorter time, for example record single frames at some selected relatively slow rate (periodically), say one frame per second, thus enables playback of these same frames in a much shorter time, or enables the monitoring of 48 hours of actual surveillance in approximately one hours (Fig. 4, column 4, lines 26-39).

Therefore it would have been obvious to a person of ordinary skill in the art at time the invention was made, to modify Hill invention according to the teachings of Coutta because it provides effective data and monitoring and operates continuously to accumulate information in a shorter time and substantial scene for memory, which can easily be implemented in an image device such as digital still or video camera.

Regarding claim 4, Hill does not explicitly state, " selecting at least one of every 10 adjacent frames ". On the other hand Coutta teaches record single frames at some selected relatively slow rate (periodically), say one frame per second, thus enables the monitoring of 48 hours of actual surveillance in approximately one hour (column 4, lines 26-39).

Therefore it would have been obvious to a person of ordinary skill in the art at time of the invention was made, to modify Hill according to the teachings of Coutta because it is a technique which, applicant has not disclosed that "10 adjacent frames " provides an advantage, is used for a particular purpose or solves a stated problem.

One of ordinary skill in the art, furthermore, would have expected Applicant's invention to perform equally well with "one frame per second taught by Coutta or the claim 9, 10 adjacent frames because both one frame per second perform the same function of shorter time, enabling for example the monitoring of 48 hours of actual surveillance in approximately one hour, that improve and provide effective monitoring over relatively long periods of time which, can easily be implemented in a camera device such as a surveillance system.

Regarding claim 5, Hill discloses the method of claim 4, further comprising performing external pattern recognition on the selected frame using an external pattern (column 3, lines 34-43, detecting of scene changes and a display is overlaid which consists substantially of a solid horizontal line (external pattern), the length of which is proportional to number of elapsed frames. This line represents the average amount of data present in video frames, when the amount of data changes abruptly, perturbations are made to the line (external pattern), such as indicated by reference).

With regards to claims 11 and 12, the arguments analogous to those presented for claims 3 and 4, are applicable.

7. Claim 9, is rejected under 35 U.S.C. 103(a) as being unpatentable over Hill et al (U.S. patent 5,471,239), in view of Wilinski et al (U.S. patent 6,810,134).

Regarding claim 9, Hill does not explicitly state "placing a tag on an image of the new object that is displayed on a monitor". On the other hand in the same field of security monitoring, Wilinski, teaches motion information used for detecting and "marking" moving objects, or to be used for automatic surveillance cameras. Thus

obtained video signal with marked objects provides for the user, because they can now detect the image changes much faster (column 7, lines 16-21).

Therefore it would have been obvious to a person of ordinary skill in the art at time the invention was made, to modify Hill invention according to the teachings of Wilinski because it provides navigating on the monitor, to designate an external pattern that has high priority in motion estimation search range to increase and achieve a better prediction and hence a resultant better accuracy, which satisfies the claim requirements.

Other prior art cited

8. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

(U.S. patent 6,462,656) to Ulrich et al is cited for personnel and asset tracking method and apparatus.

(U.S. patent 5,844,482) to Guthrie et al is cited for tagging system using motion detector.

(U.S. patent 4,233,631) to Mahler is cited for television system for displaying and recording paths of motion.

(U.S. patent 5,901,246) to Hoffberg et al is cited for ergonomic man-machine interface incorporating adaptive pattern recognition based control system.

(U.S. patent 6, 011,901) to Kirsten is cited for compressed digital video record and playback system.

(U.S. patent 6,757,008) to Smith is cited for video surveillance system.

Contact Information

9. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Seyed Azarian whose telephone number is (703) 306-5907. The examiner can normally be reached on Monday through Thursday from 6:00 a.m. to 7:30 p.m.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Bhavesh Mehta, can be reached at (703) 308-5246. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application information Retrieval (PAIR) system. Status information for published application may be obtained from either Private PAIR or Public PAIR.
Status information about the PAIR system, see http:// pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Seyed Azarian
Patent Examiner
Group Art Unit 2625
November 11, 2004